

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH**

IN RE: **IMPROVEMENT DISTRICT NO. 1**
Water System No. 5400968

TO: BOARD OF DIRECTORS
IMPROVEMENT DISTRICT NO. 1
P.O. BOX 482
THREE RIVERS, CA 93271

**CITATION FOR NONCOMPLIANCE
WITH THE SURFACE WATER TREATMENT RULE**

January, February and March 2014

Issued on April 25, 2014

Section 116650, Chapter 4, Part 12, Division 104 of the California Health and Safety Code (CHSC), authorizes the issuance of a citation for failure to comply with a requirement of the California Safe Drinking Water Act, or any regulation, standard, permit, or order issued hereunder.

VIOLATION

The Drinking Water Field Operations Branch of the California Department of Public Health (hereinafter 'Department') hereby issues a Citation to the Improvement District No. 1 Water System (hereinafter 'Water System'), for failure to comply with Sections 64652(a) and 64654(a) of Title 22, California Code of Regulations (CCR). Specifically, the Water System (mailing address: P.O. Box 482, Three Rivers, CA 93271) failed to comply with

1 disinfection treatment requirements for *Giardia* cyst inactivation during the months of
2 January, February and March 2014.

3
4 The Water System operates under Domestic Water Supply Permit No. 3011, issued by the
5 Tulare County Environmental Health Services in September of 2003. The Water System is
6 classified as a community water system serving a reported residential population of
7 approximately 200 persons through 78 service connections. The Water Systems utilizes raw
8 surface water from the Kaweah River as the source of supply. The raw surface water was
9 being treated by means of a direct filtration plant with processes that include: coagulation,
10 pressure clarification, pressure filtration, and disinfection.

11
12 CCR Section 64652(a) specifies that each supplier using an approved surface water source
13 shall provide multibarrier treatment that meets the requirements of the Surface Water
14 Filtration and Disinfection Treatment Regulations (SWTR) and reliably ensures that at least
15 a total of 99.9 percent (3.0-log) reduction of *Giardia* cysts and 99.99 percent (4.0-log)
16 reduction of viruses is achieved through filtration and disinfection. The SWTR provides a
17 2.0-log removal credit for *Giardia* cysts and a 1.0-log removal credit for viruses through
18 direct filtration treatment as provided by the Water System. To comply with Section
19 64654(a) of the SWTR, the Water System must provide an additional 1.0-log inactivation of
20 *Giardia* cysts and a 3.0-log inactivation of viruses through disinfection.

21
22 The Water System is required to calculate a daily disinfectant pathogen inactivation (CT)
23 ratio in order to determine the effectiveness of the disinfection treatment. This effectiveness
24 is dependent on various factors including temperature, pH, the chlorine residual, and the
25 contact time. The Water System was equipped with three (3) 5,000 gallon clearwell tanks,
26 in which CT was provided. Two (2) of the clearwell tanks are configured in parallel and
27 flow into one (1) 5,000 gallon clearwell tank prior to entering the distribution system.

The Water System utilizes free chlorine as the method of disinfection. The Water System is required to provide a daily CT ratio of at least 1.0 to determine compliance with disinfection inactivation requirements and monitor the performance of the disinfection process. This ratio is determined by the amount of CT achieved in relation to the amount of CT that is required. The Water System failed to maintain a daily CT ratio of 1.0 or greater for one (1) day in January 2014, one (1) day in February 2014 and seven (7) days in March 2014. These failures are summarized below in Table 1:

Table 1: CT Failure Dates

Date	CT Ratio	Calculated Log Inactivation
1/5/2014	0.5	0.5
2/12/2014	0.73	0.7
3/1/2014	0.27	0.3
3/16/2014	0.90	0.9
3/25/2014	0.47	0.5
3/26/2014	0.10	0.1
3/27/2014	0.04	0.0
3/28/2014	0.03	0.0
3/29/2014	0.40	0.4

All approved surface water sources utilized by a supplier shall be provided with continuous disinfection treatment sufficient to insure that the total treatment process provides inactivation of *Giardia lamblia* cysts and viruses, in conjunction with the removals obtained through filtration, to meet the reduction requirements specified in Section 64652(a).

NOTIFICATION REQUIREMENTS

Section 64666 (a) requires a surface water system to notify its consumers whenever there is a failure to comply with the treatment requirements specified in Sections 64652 and 64654. Public notification for violations of Sections 64652 and 64654 of the SWTR is included in Attachment A. Proof of Public Notification (Attachment B) must be submitted to the

1 Department within ten (10) days of disseminating Attachment A. The Water System must
2 either mail or hand-deliver the notice to all of its customers.

3
4 Section 64663 (b) and (c) require the Water System to notify the Department as soon as
5 possible, but no later than by the end of the next business day, or within 24 hours,
6 whichever is less, by telephone or other equally rapid means whenever: (b) There is a
7 failure to maintain a minimum disinfectant residual of 0.2 mg/L in the water being
8 delivered to the distribution system. The supplier shall report whether or not the disinfectant
9 residual was restored to at least 0.2 mg/L within four hours. (c) An event occurs which may
10 affect the ability of the treatment plant to produce a safe potable water including but not
11 limited to spills of hazardous materials in the watershed and unit treatment process failures.
12 The Water System failed to notify the Department within the 24 hours of the treatment
13 failure.

14
15 **DIRECTIVES**

16 The Improvement District No. 1 Water System is hereby directed to take the following
17 actions. Failure to comply with the Directives of this citation may result in additional
18 enforcement actions.

- 19 1. The Water System shall submit a written report to the Department by **May 26, 2014**,
20 describing:
21 (a) the cause of the failure to provide adequate pathogen inactivation, as measured
22 using the CT ratio, and any corrective actions taken, and
23 (b) any necessary operational changes that will be made to prevent future
24 disinfection treatment failures.
25
26
27

- 1 2. The Water System shall calculate CT daily and notify the Department no later than
2 by the end of the next business day or within 24 hours when the calculated CT ratio
3 on any given day is below 1.0.
4
- 5 3. The Water System shall provide public notification to all customers by mail or
6 hand-delivery by **May 16, 2014**, informing them that the water did not meet the
7 disinfection treatment requirements of the SWTR during the months of January
8 Febraury and March 2014. The public notification is included in Attachment A. The
9 Water System shall provide proof of publication of the notification to the
10 Department by **May 26, 2014**. A copy of this form is included as Attachment B.
11
- 12 4. By **June 1, 2014**, the Water System shall submit a draft Operations Plan. The draft
13 Operations Plan shall at a minimum include: operational procedures, alarm set
14 points, monitoring procedures, reporting procedures, reporting forms, CT
15 calculations, notification procedures, staffing requirements and a response plan in
16 the occurrence of treatment failure.
17
- 18 5. All submittals required by this Citation shall be addressed to:
19 Tricia A. Wathen, P.E., Senior Sanitary Engineer
20 Department of Public Health
21 Southern California Branch
22 Drinking Water Field Operations
23 265 W. Bullard Avenue, Suite 101
24 Fresno, CA 93704
25
26
27

1 **CIVIL PENALTIES**

2 Sections 116650(d) and 116650(e) of the CHSC allow for the assessment of a civil penalty
3 for failure to comply with requirements of the California Safe Drinking Water Act. Failure
4 to comply with any provision of this Citation may result in the Department imposing an
5 administrative penalty of not less than \$100 (one hundred dollars) per day as of the date of
6 violation of any provision of this Citation.

7
8
9
10
11 Date

April 25, 2014

Tricia A. Wathen
Tricia A. Wathen, P.E.

Senior Sanitary Engineer, Visalia District
DRINKING WATER FIELD OPERATIONS BRANCH

12
13
14 TW/BP

15 Attachments:

Attachment A: Public Notification Form

16 Attachment B: Proof of Notification Form



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

Improvement District No. 1 Did Not Meet Treatment Requirement (Disinfection)

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we are doing to correct this situation.

In order to ensure proper disinfection, water in the treatment plant must be in contact with chlorine or a similar disinfectant for a minimum amount of time. On January 5, February 12, March 1, March 16 and March 25 through March 29, 2014 this did not occur. Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. For this reason, water needs to mix with chlorine for a longer time period to kill such organisms. The amount of time necessary, or the "contact time", depends on the amount of disinfectant in the water and the temperature of the water.

What should I do?

- **You do not need to boil your water or take other actions.**
- This is not an emergency. If it had been, you would have been notified immediately. Tests taken during this same time period did not indicate the presence of bacteria in the water.
- *Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.* These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1(800) 426-4791.
- If you have other health issues concerning the consumption of this water, you may wish to consult with your doctor.

What happened? What is being done?

[Describe corrective action]. [Disinfectant residual levels/contact times] so far this month have met all requirements.

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- **SCHOOLS:** Must notify school employees, students, and parents (if the students are minors).

- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.
- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

This notice is being sent to you by Improvement District No. 1.

State Water System ID#: 5400968.

Date distributed: _____.

PROOF OF NOTIFICATION

(Return with copy of Notice)

As required by Section 116450 of the California Health and Safety Code, I notified all users of water supplied by the **Improvement District No. 1 Water System** (water system) of the failure to meet the **California Surface Water Treatment Rule – Contact Time** for the months of **January, February and March 2014** as directed by the Department.

Notification was made on _____ (date) by

hand delivered and/or mailed and/or posted written notice.
(circle all completed)

Signature of Water System Representative

Print Name

Date

DISCLOSURE: Be advised that Section 116725 and 116730 of the California Health and Safety Code state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the attached order may be liable for a civil penalty not to exceed five thousand dollars (\$5,000) for separate violation for each day that violation continues. In addition, the violators may be prosecuted in criminal court and upon conviction, be punished by a fine of not more than \$25,000 for each day of violation, or be imprisoned in the county jail not to exceed one year, or by both the fine and imprisonment.

Due by May 26, 2014

System No.: 5400968

Enforcement Action No.: 03-12-14C-007

Southern California Drinking Water Field Operations Branch

265 W. Bullard Avenue, Suite 101, Fresno, CA 93704

(559) 447-3300; Fax (559) 447-3304

Internet Address: <http://www.dhs.ca.gov/ps/ddwem/>